



INDUSTRIAL RELATIONS AND ECONOMIC ASPECTS - AN ANALYSIS IN OIL INDIA LTD. DULIAJAN SINCE 1991 TO 2000

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ABSTRACT

The slowdown in productivity growth and sluggish macro economic performance in recent years has drawn increasing attention to the system of industrial relations and various strategies for improving its performance. This is leading to a new era of experimentation at the organizational level with various worker participation programs, new local collective bargaining agreements, and changes in other employment practices that are designed to both improve industrial relations and organizational effectiveness. These pressures are also producing a new emphasis within management on applying strategic planning techniques to the industrial relations function as firms and unions begin to recognize the interdependence among broad business policy decisions and industrial relations performance at the workplace level. Consequently, industrial relations professionals within both management and unions are being called upon to critically examine their prevailing practices and to assess alternative strategies that satisfy organizational and worker goals. Oil India Ltd. Dulijan a major public sector industry of Assam, declared as 'Mini Ratna' is the major concern of the paper. The present study is an effort to study quantitative assessment of industrial relations practices and performance. This paper is an attempt to analyze industrial relation practices of OIL India Ltd. Dulijan and its some economic aspects. Unlike all economic organisations apart from the quality and quantity of material input, it is recognized on all sides that quality of human input is crucial factor in promoting production and productivity, consequently in growth and development of Oil India Ltd. Dulijan also. In this context quality of human input is found highly influenced by good Industrial Relations. A good and strong Industrial Relations is found to increase the effectiveness of human labour and ensures continuity in production and enhances productivity.

KEYWORDS: Industrial Relations, organizational effectiveness, quantitative assessment of industrial relations practices and performance. Management strategies and worker goal.

The central questions to be addressed by a theoretical framework that assesses the effects of industrial relations on the goals of the firm and workers are: (1) what are the critical dimensions of plant level industrial relations performance, (2) how do these influence worker and organizational goals. The industrial relations system and its performance at the plant level are seen as being influenced by a variety of external environment, demographic, organization, and historical factors. For the purposes of this case, we are less interested in the historical and environmental causes of variation in the properties of the industrial relations system than in identifying the effects of variations in these properties on organizational effectiveness and worker goals.

The performance of the industrial relations system is expected to influence organizational performance primarily through its effects on labour efficiency and product quality. Quality of Work Life efforts and related interventions are seen as strategies for changing the work organization and relationships among workers, supervisors, managers, and union leaders so as to produce improvements in the industrial relations system and its outcomes (Goodman, 1979). It is recognized, however, that not all of the goals of the firm and workers are common or compatible. Rather the employment relationship is mixed motive in nature -- some goals are shared, and through improved problem solving, integrative (join gain) solutions can be identified while other goals are inherently distributive and require bargaining or trade-off decisions (Walton and McKersie, 1965).

The Industrial Relations System and its Performance:

The dimensions of the industrial relations system and its performance at the plant level are not well specified in the theoretical or empirical literature. In this paper, we want to study the industrial relations system at the plant level influenced economic performance through three interrelated routes: (1) the effectiveness of the management of conflict in the union-management relationship, (2) the motivation, commitment, and behaviour of individual workers and work groups, and (3) the rules and practices governing the allocation and use of human resources. These emerged as tentative hypotheses for explaining the empirical relationships observed between measures of industrial relations performance (grievance rates, discipline rates, absenteeism, and labour-management climate) and economic performance (product quality, labour efficiency etc). In this section we spell out more fully the links expected between these aspects of plant level industrial relations and organizational effectiveness.

One critical function of an industrial relations system is to establish procedures and processes for addressing and resolving conflicts or problems that arise between employees and management. In Oil India Ltd, unions and employers rely heavily on formal contract negotiations and grievance procedures for this purpose. The effectiveness of these formal negotiation and conflict resolution mechanisms are directly related to organizational effectiveness for at least three reasons. First, because these are formal representative procedures they require a considerable amount of time, people, and resources to manage. Thus, the sheer volume of grievances and bargaining demands that arise in a plant will have an

effect on the costs of managing a plant. To the extent that management and union resources (time and people) are devoted to managing these formal adversarial procedures, fewer resources are available for training, problem solving, communications and other productivity, human resource management, or organizational development activities. This might be described as the displacement effect (Katz, Kochan, and Gobeille, in press). Second, the volume of grievances and bargaining demands can be symptomatic of the success or failure of the parties to resolve differences on a more informal basis or at early steps of the formal procedures. Thus, the number of grievances or bargaining demands, and the inability of the parties to settle issues without frequent threatened or actual work stoppages most likely signal deeper seated problems in the conflict resolution/problem solving systems in the plant. Thus we can expect that plant level measures of grievance rates, the number of bargaining demands, the length of negotiations, strike threats and strike occurrence should be systematically related to other measures of industrial relations performance. A good deal of previous research on the determinants of grievance rates is consistent with this argument (Peach and Livernash, 1974; Thomson and Murray, 1976; Knight, 1978; Katz, Kochan, and Gobeille, in press). Third, because the formal grievance and bargaining processes focus on distributive issues, they inherently entail some degree of political and tactical posturing, gamesmanship, bluffing, and commitment building tactics (Walton and McKersie, 1965; Schelling, 1960). To the extent that these political or distributive bargaining tactics escalate, get perpetuated over time, and spread across the entire range of issues that the parties deal with, a high conflict/low trust syndrome (Fox, 1974) or what Boulding (1962) described as a "conflict trap" can set in. That is, the distributive or inherently conflict full patterns may drive out the potential for integrative bargaining or cooperation even on those issues over which the parties share common interests. The belief that this is a common feature of current industrial relations is what gives rise to the criticism that our system is "too adversarial" (Barbash, 1980). For these three reasons, it can be said that indicators of greater conflict between labour and management at the shop floor level will be associated with lower efficiency, poorer quality and generally, poorer plant level organizational performance. Secondly, there may exist strong interrelationships between the various indicators of plant level industrial relations performance.

It should be noted that we are not implying here that these conflict resolution systems do not serve important and useful functions for labour and management. They are natural and necessary procedures that have endured the test of time for resolving conflicts that are bound to arise in any employment relationship and for protecting the individual rights of employees. It is not their existence per se but their poor performance that is expected to lead to lower levels of organizational effectiveness.

While the conflict resolution system reflects the broad institutional features of an industrial relations system, it is clear that the motivation, attitudes, and behaviour of individuals and informal work groups can exert an independent effect on organizational performance as well. Yet, there has been a longstanding (Brayfield and

Crockett, 1955; Herzberg, et al., 1959; Schwab and Cummings, 1970) and to date unresolved (Dyer and Schwab, 1982) debate on the direction and strength of the causal relationships between these individual attitudinal and behavioural characteristics, and organizational performance. On the one hand, there is abundant evidence to suggest that there is no consistent or simple causal relationship between individual worker satisfaction and individual worker performance (Schwab and Cummings, 1970). On the other hand, a wide range of theoretical arguments suggest that individual worker ability, motivation, and participation in job related decision-making will affect both organizational effectiveness and individual worker satisfaction (Hackman and Oldham, 1976; Goodman, 1979; Walton, 1980; Lawler and Ledford, 1981-82; Mowday, Porter, and Steers, 1982). To the extent that workers have the ability and willingness to make suggestions and to participate in the search for ways to improve job performance, and to the extent these efforts can be maintained over time, high levels of individual worker motivation/commitment participation should lead to improved organizational effectiveness and worker satisfaction. These potentially positive links between individual attitudes and behaviour and organizational effectiveness can only be maintained over time if the larger economic and institutional environment maintains support for high levels of individual involvement and labour management cooperation (Walton, 1980; Kochan and Dyer, 1976). Unless the larger union-management relationship and management systems remain supportive and workers experience tangible rewards from their involvement, high levels of commitment are likely to either gradually atrophy (Walton, 1975) or end abruptly in response to some visible conflict (Goodman, 1979). Another aspect of individual behaviour that is expected to be related to other industrial relations outcomes is the absenteeism rate in the plant. While the evidence on the strength of the relationship between job satisfaction and the frequency that an individual worker is absent is mixed (Dyer and Schwab, 1982), it has been argued that voluntary absenteeism should be related to employee motivation (Steers and Rhodes, 1978). Others have suggested that the relationships between the aggregate plant-wide rate of absenteeism and worker attitudes, commitment and other aspects of industrial relations should be stronger than the relationship between individual worker attitudes and absenteeism (Nicholson, Brown, and Chadwick-Jones, 1976). In any event, the costs imposed by high rates of absenteeism should exert an independent effect on organizational performance (Hackman and Lawler, 1971) regardless of the relationship between absenteeism and other industrial relations outcomes.

We therefore expect that measures of employee participation in suggestion programs, attitudes, and absentee rates to be related to other industrial relations performance measures and to measures of organizational performance. The substantive rules and practices governing the organization of work, the allocation of workers, the compensation system, and the adaptability to change serve as a third important channel through which the industrial relations system of a plant will influence organizational effectiveness and employee goals. Work rules and their administration and modification historically have been recognized as important factors influencing labor costs and productivity (Slichter, 1941; Slichter, Healy, and Livernash, 1960; Hartman, 1973; McKersie and Hunter, 1973). These rules and practices develop over time both explicitly through collective bargaining agreement provisions and informally (Roy, 1952; Dalton, 1959; Kuhn, 1961; Sayles, 1958; McKersie and Klein, 1982) in both union and non-union situations. Rules are necessary to bring about stability and equity in work practices and to protect the rights and responsibilities of both workers and their employers. Over time, however, work practices and rules can accumulate, and become outmoded because of technological or other changes in the plant or the product. Yet, they also become difficult to change since change often threatens worker job security by affecting the jurisdiction of work, seniority and transfer rights, the number of workers required to perform the given volume of work, etc. Thus, work practices discussions are inherently mixed motive in nature--all parties share an interest in eliminating wasteful work practices that add to costs, yet changes in practices may require changes which threaten the job security or alter the promotion prospects of individual workers. Thus, the flexibility with which the industrial relations system manages work rules and work practices at the plant level will influence organizational effectiveness and worker objectives.

As with the bargaining process and grievance procedures, establishing policies and rules governing the organization and distribution of work opportunities is a necessary and essential function of the industrial relations system (Dunlop, 1958). Yet the build up of rules and the inability to modify work practices can reduce organizational effectiveness. Thus, again it is the ability of the parties to manage and adjust work practices to meet the productivity needs of the firm and the interests of the workforce that is critical, and it is not the presence of rules per se that influences organizational effectiveness. In summary then, we are proposing that the degree of conflict resolution, individual worker attitudes and behaviour, and the flexibility within substantive work rules are three key dimensions of an industrial relations system that will have important effects on organizational effectiveness. Over time these dimensions become interrelated in a reinforcing cycle. Worker dissatisfaction or lack of trust may lead to higher levels of grievances and bargaining demands and to a more adversarial relationship between workers and management. Inability to effectively resolve conflicts is, in turn, likely to lead to greater emphasis on legalistic rules and strict enforcement of contract terms and the further build-up of work rules that one or both of the parties will resist changing. The high conflict/low trust cycle will then spill over to reinforce supervisors' beliefs in the need for rigid/authoritarian styles of supervision,

and employee motivation, job performance and commitment to the organization will decline. To the extent these efforts are successful in increasing trust, employee involvement, and problem solving in the short run, they can be expected to lead to short run improvements in both worker satisfaction and organizational effectiveness. Improved trust and problem solving and a more participative managerial style may also lead to lower grievance rates or settlements at lower levels of the grievance procedure. At an advanced stage, QWL efforts may also lead to more flexibility in work rules. To the extent that these QWL efforts can coexist with the on-going distributive aspects of the bargaining relationship and survive political and economic pressures that challenge these efforts over time, they can be expected to help organizations maintain higher levels of organizational effectiveness.

The above discussion provides the theoretical framework that the collection and analysis of data designed to assess the effects of an industrial relations system on organizational effectiveness and worker goals, and to track and evaluate the effects of QWL or other intervention strategies. Because of the importance we attach to the effects of the larger contexts (economic environment, distributive bargaining, organizational policies, union-management climate, etc.) a longitudinal research design that is sensitive to the cycle of activities that occur in a normal bargaining relationship is critical to an evaluation framework. Short run improvements in worker attitudes, motivation, grievance rates, and even measures of economic performance are necessary but not sufficient tests of the effects of QWL efforts. The more telling test is whether the short run positive effects can be maintained through a complete cycle of contract negotiations, the negotiation of changes in local work rules, turnover of key management or union decision-makers, and in an even broader sense, the engagement of management and union officials in major bargains over strategic issues such as the organization of new plants or the reinvestment of resources in existing plants. We obviously cannot build all of these tests into the empirical analysis to follow, nor would we expect any single study in the future to do so. These comprehensive design criteria are spelled out here to put our own work and future work in perspective.

The industrial relations performance measures: The following can be used in the analysis and their respective variable names are:

1. The number of grievances filed per 100 workers which are potential to disturb Industrial Relations. (Grievance)
2. The number of disciplinary actions per 100 workers, actions which involve a suspension or some more severe penalty. (Discipline)
3. The number of demands submitted by the union in contract negotiations. (Demands)
4. The number of days it took to reach a settlement. (Negtime)
5. The number of strike intent letters issued by the union. (Strikelet)
6. The number of suggestions submitted per employee in the company's suggestion program. (Sugphw)

Economic Performance Measures/ Organisational Effectiveness Measures:

The organizational effectiveness measure primarily captures a number of key dimensions of the economic performance of each plant. Economic performance of each plant can be measured with variables that measure the costs of workers' compensation, accidents and illnesses, the number of illnesses and accidents, and with measures of the direct labour efficiency and product quality in each plant. These measures are to be treated separately because, although the presence of higher accident or illness rates in a plant may indirectly affect direct labour efficiency and product quality. A detailed description of these variables follows.

1. The numbers of workers benefits due to collective bargaining agreement in per hundred workers. (Brate)
2. The number of injuries requiring more than minor first aid in per hundred workers. (Irate)
3. The number of accidents producing an injury which prevented an employee from performing his or her normal job in per hundred workers. (Arate)
4. A quality index derived from a count of the number of faults and "demerits" that appear in inspections of the product calculated by the company's industrial engineers. A higher quality score is associated with better product quality. (PQuality)
5. A direct labour efficiency index which compares the actual hours of direct labour input to standardized hours calculated by the company's industrial engineers. A higher direct labour index is associated with higher efficiency and lower costs. (Dlef)

DISCUSSION:

The descriptive statistics provided in Table 3 illustrate the importance of examining the diversity of outcomes that are produced by collective bargaining in different bargaining relationships. Despite the common technology, union, and employer from which these data are drawn, there is a wide variation in grievance rates, discipline rates, absenteeism, and other industrial relations and economic performance measures in Oil India Ltd. Note, for example, that grievances per one hundred workers varied from a low of 8 in the plant to a high of 32 in another year. Absenteeism varied between 2 to 14. The number of contract demands introduced in the local negotiations agreement varied from a low of 12 to a high of 21 and so on.

The correlations among the measures of industrial relations performance in the industry is presented in Table 4. The table reveals a high degree of inter-correlation among the various measures of industrial relations performance thus supporting the hypothesis regarding the inter-connected nature of the industrial relations system. The higher the grievance rate in the industry, the more demands introduced into local negotiations (.466) and longer the days to solve it (.421). The correlation with strike number, all of these correlations are statistically significant at the 1% level (.599).

The connection between individual behavior and the level of conflict also is revealed in the associations that absentee rates and employee participation in suggestion programs have with grievance rates, discipline rates, the number of demands, negotiation time, and the issuance of strike letters.

Relationships between Industrial Relations and Economic Performance: Correlations between measures of economic performance and a number of the industrial relations performance measures are presented in Table 5. These correlations provide strong supporting evidence for the hypothesis that the level of conflict and individual behaviour can affect organizational effectiveness.

Higher grievance rates are associated in a statistically significant manner with lower direct labor efficiency ($r = -.175$), poorer product quality ($r = -.464$), and more injuries ($r = -.365$) and more accident rate ($r = .250$). The issuance of more strike letters in a industry is associated with lower direct labor efficiency ($r = -.123$), poorer product quality ($r = -.58$), lower injuries ($r = -.509$) and lower accident rate ($r = .069$). These correlations are statistically significant at the 1% level. Absenteeism is significantly related lower labour efficiency ($r = -.539$) and poorer product quality ($r = -.846$).

Correlations between the various industrial relations performance measures support the hypotheses regarding the inter-connected nature of the industrial relations system and economic performance. We find evidence that conflict carries over from the grievance function, to local bargaining, and into strike threats and

strike occurrence. We also find evidence that individual attitudes and behaviour (as measured by absentee rates, strikes and participation in suggestion programs) are strongly related to measures of plant level conflict intensity. We find strong evidence of an association between measures of industrial relations and economic performance, where the latter is measured by direct labour efficiency, product quality, and sickness and accident rates. Here, we find support for our view that an individual behaviour channel in the association between industrial relations and economic performance.

Conclusion: A core theme that emerges from the above discussion is that there is a strong interrelation among Industrial Relations Parameters in Oil India ltd. The numbers of demand and grievances are not so large with compare to some other industry in spite of being a "Miniratna" company. Company is capable of maintaining better industrial Relations for its sustainability. It can also be concluded that Industrial Relations can play a significant role in Productivity and product quality and cost of management. In Oil India Ltd. Duliajan the labour efficiency in terms of Industrial Relations is quite satisfactory.

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Table 1: Industrial Relations Performance Indicators

Year	Grievances	Nos of Days	Absenteeism	Discipline Rate	Nos of Demand	Strike	Suggestion
1991/92	18	12	8	1	15	2	15
1992/93	22	14	14	2	11	3	12
1993/94	32	20	7	1	16	4	21
1994/95	27	9	11	2	15	2	15
1995/96	18	12	2	.00	11	3	16
1996/97	19	11	8	1	14	1	19
1997/98	12	9	3	.00	9	2	09
1998/99	32	16	12	2	25	3	10
1999/00	17	12	11	1	9	2	13
2000/001	11	11	11	3	11	2	15
2001/002	11	9	9	.00	10	3	16
2002/03	17	10	6	.00	9	2	19
2003/04	12	9	7	1	12	4	20
2004/05	10	9	11	3	14	3	21
2005/06	11	11	9	1	15	4	14
2006/07	10	7	6	2	11	2	15
2007/08	11	9	2	3	15	3	06
2008/09	8	7	3	1	10	1	07
2009/10	11	9	2	2	9	1	10
2010/2011	9	7	4	2	12	2	14

Source: Office of the Learning and Development, Oil India ltd.

Table 3: Mean, Maximum, Minimum value and standard deviations of the parameters

Year	BRate	IRate	ARate	PQuality	DLef
1991	12	05	03	-	-
1992	18	15	04	-	-
1993	07	14	02	-	-
1994	18	11	07	-	-
1995	19	06	08	-	-
1996	06	14	01	-	-
1997	09	11	07	-	-
1998	14	09	06	-	-
1999	13	08	03	-	-
2000	11	10	05		08
2001	21	12	04	109	14
2002	17	08	07	118	16
2003	16	09	09	97	12
2004	15	07	0	99	18
2005	14	05	0	78	19
2006	13	08	01	100	17
2007	22	09	02	109	20
2008	11	07	03	112	14
2009	13	11	04	117	22
2010	12	10	01	118	25

Table 4: Correlation among IR Performance

	Grvn	Demand	Negtime	Strike
Grvn	.000	.466	.421	.620
Demand	.466	.000	.242	.321

Calculated by researchers

**Table 5: Correlation between IR Performance and Economic Performance
(measured by simple correlation coefficient)**

	Direct Labef	PQuality	Brate	Irate	Arate
Grv	-.175	-.464	-.108	.365	.250
Abst	-.539	-.846	.38	.208	-.073
Disp	.155	.196	.069	.063	-.382
Demand	-.365	-.505	-.229	.306	.048
Negtime	.240	-.171	.444	-.043	-.108
Strike	-.123	.583	.334	-.059	.068
Sug	-.278	-.748	-.151	.087	-.009

Calculated by researchers